

Understanding how chiropractors build trust with patients: a mixed-methods study

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Introduction: Trust is a key component of any therapeutic relationship and correlates with treatment satisfaction. Patients with high levels of trust in their healthcare providers report more beneficial health behaviours, fewer symptoms, and a higher quality of life. The purpose of this study was to explore how chiropractors in British Columbia (BC) understand the process of building trust with patients.

Design: This was a sequential exploratory mixed-methods design. Semi-structured one-on-one interviews informed an online survey that was sent to all BC Chiropractic Association members.

Participants: Interviews were completed by six chiropractors from the Vancouver Practice Based Research Network; an online survey was completed by 97 chiropractors.

Results: Themes of honesty, communication, perceived competence, and caring emerged during interviews.

Introduction : La confiance est un élément fondamental dans toute relation thérapeutique; elle est en corrélation avec la satisfaction à l'égard du traitement. Les patients faisant grandement confiance en leurs professionnels de la santé affirment avoir une attitude plus bénéfique à l'égard de leur santé, moins de symptômes et une meilleure qualité de vie. Cette étude visait à examiner comment des chiropraticiens de la Colombie-Britannique (C.-B.) comprennent comment établir un lien de confiance avec leurs patients.

Méthodologie : Cette recherche a été menée selon des méthodes exploratoires mixtes. Des entrevues individuelles semi-dirigées ont précédé l'envoi d'un sondage en ligne à tous les membres de la BC Chiropractic Association.

Participants : Les entrevues ont été menées par six chiropraticiens du Vancouver Practice Based Research Network; 97 chiropraticiens ont répondu à un sondage en ligne.

Résultats : L'honnêteté, la communication, la compétence perçue et la bienveillance ont été les aspects qui sont ressortis des entrevues. Les résultats du sondage ont confirmé l'importance de l'honnêteté,

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Survey findings confirmed the importance of honesty, communication, and perceived competence in building trust.

Conclusion: Chiropractors can employ a variety of interpersonal strategies to foster trust with patients.

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KEY WORDS: chiropractic, interpersonal skills, interviews, mixed-methods, survey, trust

Introduction

Collaboration, affective bond, agreement, and trust are constructs of any therapeutic alliance between a patient and a care provider, in this case a chiropractor.¹ Stilwell and Harman² suggested that a “therapeutic alliance provides the central foundation for patients to receive the benefits from other contextual factors and their placebo effects, further improving health related outcomes”. The concept of trust is multifaceted and requires vulnerability based on the goodwill, benevolence, and competence of another individual.³ Prior to the formation of trust between patient and chiropractor, particular events or phenomena are generally required. Bell and Duffy⁴ described antecedents of trust as perception of practitioner competence and past experiences of positive outcomes. Understanding how chiropractors foster trust with patients may offer insights into contextual antecedents of trust. According to Hall *et al.*⁵, five key components of physician trust include: fidelity, competence, honesty, confidentiality, and global trust. These may also hold true for chiropractors; however, patient characteristics and situational factors are also antecedents of trust. Patient perception of practitioner benevolence and belief that their chiropractor is working in the patient’s best interest may influence trust.⁴ In addition, positive communication, openness, and listening may influence the formation of trust.⁴

The concept of trust is extremely complex but is fundamental in a therapeutic relationship.⁴ Trust affects patient behavior and attitudes, including willingness to seek care, return for subsequent episodes of care, divulge sensitive information, and adhere to a plan of management.⁶ Trust in physicians has been shown to correlate positively with adherence to treatment recommendations, willingness to

de la communication et de la compétence perçue dans l’instauration de la confiance.

Conclusion : Les chiropraticiens peuvent utiliser diverses stratégies interpersonnelles pour favoriser la confiance avec leurs patients.

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MOTS CLÉS : chiropratique, entregent, entretiens, méthodes mixtes, sondage, confiance

recommend a physician to others, perceived effectiveness of care, improvement in self-reported health, staying under the care of the same physician, and avoiding seeking second opinions.⁵ Patients with high levels of trust in their healthcare providers report more beneficial health behaviours, fewer symptoms, a higher quality of life, and greater satisfaction with treatment.⁷ Patient trust in their chiropractor can be defined as a collaborative relationship that includes knowledge sharing, professional and emotional connection, partnership agreement, respect, and honesty.⁸ Understanding how chiropractors build trust with their patients will provide insights into fostering trust.

Trust has been positively correlated with satisfaction; therefore, a trusting therapeutic alliance may foster patient satisfaction and may improve the patient experience with their healthcare practitioner.³ Trust is an important component of the therapeutic alliance and can be separated into technical skills and relational skills.⁹ Patients and caregivers have emphasized that relational skills more important than technical skills as they enable patients to feel safe.⁹ Feeling safe is often a pre-requisite for treatment as there can be a “...sense of loss of control caused by positional inequality”.⁹ There is a gap in the academic literature with respect to patient trust during encounters with complementary medicine practitioners generally and chiropractors specifically. The vast majority of research regarding patient trust pertains to physicians and nurses. The existing literature relies mostly on observational data and very few qualitative or mixed methods studies have evaluated individual experiences with trust. Chiropractic training on the topic of interpersonal skills and communication is sparse. Therefore, this study was intended to

bridge the current gap in knowledge and is expected to benefit both chiropractors and their patients. The purpose of this study was to explore how chiropractors in British Columbia (BC) understand the process of building trust with patients.

Methods

Study Design

A two-phase, sequential exploratory mixed methods design was conducted using semi-structured interviews followed by a survey. Sequential collection and analysis of both qualitative and quantitative data were used to gain a deeper understanding of how chiropractors perceive to build trust with patients. A mixed methods approach was used as it draws from the strengths of both methodologies, gaining insights into the target population through a humanistic, interpersonal approach, while also applying descriptive statistics to larger sample population findings.¹⁰ The value of mixed methods is reinforced by findings and analysis that result from two strands of data.^{10,11} In order to fully explore the research question, the proposed design aimed to capture contextual, field-based information to inform survey questioning of a larger sample population.¹⁰

The first phase of this study included an initial exploration of six chiropractors' perspectives of how trust is formed between patients and their chiropractors. A phenomenological approach was employed in order to capture subjective aspects of how chiropractors build trust with patients. The phenomenological strategy of inquiry attempts to capture the essence of human experiences through studying a small number of participants.¹¹ The second phase of this study incorporated an online survey which built on the interview findings to verify the results within a larger sample of chiropractors.

Interviews

Six chiropractors licensed with the College of Chiropractors of British Columbia were recruited using convenience sampling. This form of non-random sampling allowed participants to be selected for study participation based on availability and willingness to participate.¹² All twenty-five members of the Vancouver Chiropractic Practice-Based Research Network (PBRN) were invited to participate in the study by the PBRN administrative

assistant. This population was selected for ease of recruitment given their commitment to research as evidenced in their participation in a PBRN. Potential participants received an invitation and a reminder email over two weeks to respond with interest in participation. Eight potential participants responded and agreed to participate in the interview process. Participants were located in a variety of geographic locations, primarily the Greater Vancouver area and Vancouver Island.

Semi-structured one-on-one interviews with six chiropractors were conducted, recorded, transcribed, and analyzed prior to the quantitative phase. Chiropractors were interviewed in a private setting of their choice for 30-60 minutes. Interview settings were either online through Skype or in person. Both participant and interviewer were in a private space away from colleagues to ensure that confidentiality was maintained. A phenomenological approach was employed; it assumes that knowledge comes from the subjectivity of participants, rather than an external source.¹³ As such, the interview style included several open-ended questions to accommodate for exploration of unexpected findings. We employed a funnel structure in our interviews by initially asking broad questions, followed by questions based on four narrower priori codes; honesty, competence, fidelity, and confidentiality. Semi-structured interview questions were influenced by concepts from the modified Healthcare Relationship Trust Scale and the Wake Forest Scales Measuring Trust.^{14,15} The interviewer practiced reflexivity during the course of the interview to maintain awareness of the possible effects that their clinical background as a chiropractor could lead to assumptions and interpretation of findings.¹⁶ The interviewer also kept a journal of thoughts, impressions, and potential biases following each interview. Participants were asked for informed consent prior to commencement of the interview.

In-person interviews were recorded through the iPhone Voice Memo application and recordings during Skype interviews were enabled using Ecamm call recording software. The interview protocol can be found in Appendix 1. Audio recordings were immediately downloaded and saved to a password-encrypted computer and file names did not display any identifying information. Similarly, computerized files were saved to a password-encrypted computer. Participants were not offered any compensation for their time. The interviewer took hand-written notes to

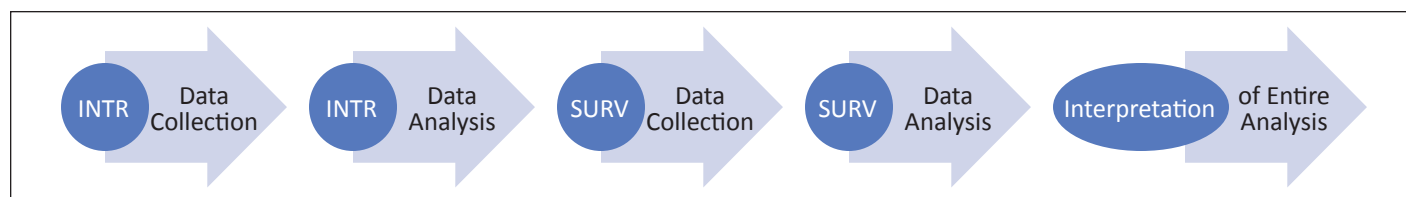


Figure 1.

Sequential Exploratory Design (from Cresswell (2009)¹¹ (INTR = Interviews SURV = Survey).

record salient points and observational data during and after the interviews. Audio recordings were transcribed verbatim by the interviewer and compared with handwritten notes in order to compile a draft transcript. Member checking was used, as participants received a copy of the transcripts and were asked to provide any corrections or feedback. A visual model of the sequential exploratory design is illustrated in Figure 1.¹¹ Thematic analysis was performed by one author (GC) and guided by the six-phase framework by Braun and Clarke (2006) in Table 1.¹⁷ The aforementioned a priori coding framework was implemented to improve trustworthiness of our findings.¹⁸

Survey

There is no existing survey that assesses factors of perceived patient trust amongst chiropractors. Creating a novel survey based on interview findings ensured that our questions reflect the perspectives of chiropractors in BC. Therefore, a survey was created following qualitative analysis to verify emerging themes related to chiropractors'

perceptions of trust. The survey consisted of questions regarding demographic data and factors relating to patient trust that emerged from our interviews (Appendix 2). Two chiropractors pilot tested the survey to ensure the appropriateness and feasibility of questions. Both chiropractors provided feedback on the format and content of the survey to ensure that the questions were not ambiguous and were understood in the same way by both chiropractors who tested them. All 1,154 registered members of the British Columbia Chiropractic Association (BCCA) were invited to participate in the survey. The BCCA agreed to distribute the survey to its members. The survey was emailed twice within one month by the BCCA, inviting members to complete the survey. The survey invitation accompanied an informed consent form.

Survey participants were directed to a UBC Survey Tool (Qualtrics) link. Qualtrics complies with the BC Freedom of Information and Protection of Privacy Act as data is kept secure and is stored and backed up in Canada. Participants had one month to complete the survey and no

Table 1.

Phases of thematic analysis adapted from Braun and Clarke (2006)¹⁸

Phase	Description of the process
Familiarizing yourself with your data	Transcribing data with audio and written notes, reading and re-reading the data, reflection of meaning, noting down initial ideas.
Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, identifying chunks of data relevant to each code.
Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
Reviewing themes	Checking if the themes accurately represent the codes and entire data set.
Defining and naming themes	Ongoing analysis to refine the details of each theme and adequately categorize sub-themes. Generate clear definitions and names for each theme.
Producing the report	Selection of compelling quotes, final analysis of selected extracts, relating back to the research question and literature, producing a scholarly report of the analysis.

compensation was offered for participation in this survey. Descriptive statistics were used to provide observations, comparisons, and summaries of survey data.

Ethical Considerations

The University of British Columbia Ethics Review Board approved this research. Participants received information about the study procedures, confidentiality and each participant provided informed consent. Written and verbal consent was obtained prior to interviews. Survey participants were expected to read the study preamble and provided implied consent by voluntarily participating.

Results

Demographic Data

Interview participants self-reported chiropractic college dates of graduation ranged from 1988-2010 and the mean graduation date was 2000. Four participants practice in urban locations, one practices in a suburban location, while one other participant practices in both urban and suburban locations.

Themes

From the interview analysis, four main themes emerged. These were honesty, communication, perceived competence, and caring. They provided insights into strategies to foster trust with patients and provided the basis for the survey questions. Interviews were coded with the letter I, followed by an interview number (1-6).

Theme 1: Honesty

The concept of honesty involves telling the truth and avoiding intentional falsehoods.⁵ In several interviews, honesty emerged as a foundation for establishing trust. Participants suggested that a trusting relationship would be established more quickly if they admit to mistakes and acknowledge their own limitations; which sometimes resulted in a referral. Providing a realistic prognosis, regardless of severity was seen as important to establishing an honest dialogue with patients. When participants discussed honesty, they often described scenarios where they were acknowledging points of conflict with patients in a humble and genuine manner. Participants described that patients would be able to tell if their chiropractor is being honest. Participants felt that honesty would allow

patients to feel an increased level of confidence in their chiropractor. It was also suggested that patients would often reciprocate the honesty that was portrayed by their chiropractor. One participant (I4) mentioned that they establish a better relationship with patients when they combine honesty and compassion. Honesty also helped patients understand what to expect from their chiropractor.

“I just try to figure out all their points are of negativity and I address them as opposed to pretending they’re not there. Because if you chicken out, you lose them.” [I4]

“...if you’re honest with them (patients) and you tell them ‘I’m going to do my best to get you better, no matter what’. What I always say is that ‘We’re going to try to get you better, it might not be me. I might need help with other people. But the end result is that I’ll do everything I can to help you out’.” [I1]

A sub-theme of honesty that arose from the interviews was authenticity. This was not significant enough to include as an independent theme, but it appeared to fit within the context of honesty. One participant (I2) expressed the belief that chiropractors demonstrating authenticity will have greater success in developing trust with patients. Another participant (I5) felt that displaying genuine interest in the patient helped establish rapport. They mentioned that “trying to exist at a human level with them” (I5), would build trust. When asked about characteristics of an authentic chiropractor, one response was:

“I think they’re very direct. I think they’re not afraid to be themselves. So, they’re staying human.” [I2]

Theme 2: Communication

In a healthcare setting, the exchange of information can be a complex interaction, involving verbal and non-verbal communication. The concept of communication was discussed during the interviews and importance was placed on listening to patients as well as clearly setting expectations. Uninterrupted listening provides an opportunity for patients to feel engaged and was described as a method of forming meaningful connection.

“...I think it’s a lot of listening and not interrupting so they can tell their story and I think it’s about yes making some sort of connection that’s other than their healthcare.” [I3]

Participant 2 (I2) described that listening at the beginning of a new patient encounter can inform whether follow-up questioning will be close-ended or open-ended. Interactions with patients often involve education regarding their condition, their practitioner’s scope of practice, procedural or safety of interventions. For example, participants mentioned that they describe a manipulative procedure to patients before they are performed on a patient for the first time. Participants also noted that they try to avoid technical jargon and speak in plain language that the patient will understand. Clear and timely communication is an opportunity for chiropractors to understand patient expectations and assure patients that they are in a safe environment.

“I tell them at the very beginning that I will never do things by surprise. I will always explain things before I do it. You are always the boss, I’m not. This visit is about you not me.” [I5]

Important aspects of patient communication also occur outside the treatment room. One participant mentioned her front desk staff would warn patients if the chiropractor was running late, which helps patients manage their expectations. Despite the emphasis on verbal communication and listening, there was acknowledgement that non-verbal communication plays an important role in the clinical encounter. A handshake, a smile, and eye contact can help establish rapport but importantly, understanding when it is and isn’t appropriate to touch a patient given the intimate nature of manual therapy. During patient encounters, identifying body language can be a helpful tool to understand patient comfort. Participant 3 (I3) described crossing legs, how patients hold their hands, and whether they look at you as non-verbal indicators of patients’ level of trust. Participant 4 (I4) described a mirroring technique which matches the patients’ body language and communication style in order to build trust.

“Eye contact, firm handshake, knowing when and when not to touch somebody, because obviously

it’s a really an intimate experience when you’re seeing a chiropractor” [I3]

Theme 3: Perceived competence

During our interviews, most chiropractors felt that trust would be enhanced when patients believe that their chiropractor is competent. The perception of competence was thought to contribute to confidence in one’s chiropractor. There was emphasis on the portrayal of competence or “perceived competence” to patients which appeared to be important to establishing trust. Appearing competent was not solely based on technical skills but also interpersonal skills, cognitive skills, ethics, and appearances. Chiropractors believe that their competence is demonstrated in a variety of ways including professional attire, online reviews or in-person recommendations, difficulty booking appointments, and clinical outcomes. Perception of competence is also likely influenced by the chiropractor’s ability to effectively communicate and educate their patients. Patients likely have varying expectations of their chiropractor, based on preconceived ideas or past experiences with healthcare providers. If patients had seen a chiropractor in the past it could influence their ability to trust a new practitioner; however, our interviews did not uncover any consensus on this topic. It appeared that it was more difficult to build trust with some patients who have seen chiropractors before, while it may be easier with others. Patient education was mentioned as a method of demonstrating cognitive competence as one participant reported using a computer tablet to review relevant anatomy with patients. It was also reported by participants that creating a professional clinic environment helped portray competence to patients, which was expected to build trust.

“What I need, is I need by the second visit, by the third time I see them, I need a noticeable improvement or I’m going to lose them. Because now you’re just another person taking their money, doing something that is not going to work.” [I4]

Theme 4: Caring

Participants described the importance of demonstrating a caring demeanor; although, they also expressed the importance of demonstrating empathy and commitment to the best interest of the patient. The term “caring” was used to describe this theme, although this theme represents

more than just caring. This theme represents a genuine interest in a patient's well-being and avoiding or disclosing conflicts of interest. Many of our interviewees identified that patients can be vulnerable and that demonstrating empathy and placing patient needs above self-serving motives help establish trust. Participants have stated that they avoid coercive marketing tactics, often finding that aggressively marketing products can deter patients from developing a therapeutic alliance. Participants reported that products such as pillows and orthotics they were sold in their clinic for convenience and recommended based on clinical need, rather than financial motivation.

Patients can be financially vulnerable and may have difficulties paying for chiropractic services. Participant 1 (I1) ensures his fee structure is considerate of individuals who may have financial barriers to care, for example: students, elderly, or individuals on welfare. Demonstrating a consideration for patient vulnerabilities can help portray a caring and respect for patients. Participants mentioned that chiropractors can demonstrate a caring demeanor by offering tea or water in their waiting rooms, hiring and training friendly staff, and collaborating with other healthcare professionals.

"When I refer them out to another discipline, another chiropractor or something like that, that actually they trust me more than anything else." [I1]

Additional observations

Participants were asked whether time spent with patients influences the formation of trust. Time spent with patients was not a theme; however, it was an important component of building trust. One participant discussed the need to increase time spent with patients over the years as it became difficult to provide a comprehensive approach during short periods of time. As mentioned by two participants, having too little or too much time with a patient can negatively impact trust.

"It's one of those scenarios where if you're literally in and out, there's not enough interaction for people to get to know you. (Conversely, there is) an osteopath in town that spends two hours with their patients. And most people were just like, 'That was way too much'. It actually eroded their credibility." [I5]

Table 2.
Survey demographic variables (n=97).

	Mean	Mode
Date of birth	1969	1971
Date of graduation from chiropractic college	1997	2000
Urban Practice setting	53 (54.6%)	
Suburban Practice setting	38 (38.2%)	
Rural Practice setting	6 (6.2%)	
What is the main focus of your chiropractic care?		
General musculoskeletal care (spine and extremities)	67	69.1%
Subluxation-based	13	13.4%
Wellness/Prevention	7	7.2%
Family care	5	5.2%
Pediatrics	2	2.1%
Sports	2	2.1%
Spine	1	1.0%
What is the average length of your patient interactions?		
11-15 minutes	41	42.3%
16-20 minutes	23	23.7%
5-10 minutes	23	23.7%
21-25 minutes	4	4.1%
26-30 minutes	4	4.1%
Less than 5 minutes	2	2.1%

The concept of vicarious trust arose when discussing how trust had been broken or gained by interactions with other individuals. Front desk staff, referring healthcare providers, family and friends all have the ability to influence trust on a particular chiropractor, to varying degrees.

Survey data analysis

1,154 practicing chiropractors are members of the BCCA and 97 responded to the survey (8.4%). As seen in Table 2, chiropractors most frequently identified their practice as "General musculoskeletal care (spine and extremities)" (69.1%). Forty-two percent of respondents spend between 11-15 minutes during patient interactions and 89.7% of respondents spend between 5-20 minutes with patients

Table 3.
Survey Likert questions.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Chiropractors who are honest are more likely to form trust with their patients. (n=97)	3 (3.1%)	0 (0.0%)	2 (2.1%)	11 (11.3%)	81 (83.5%)
My patients are more likely to trust me if I'm authentic. (n=97)	3 (3.1%)	0 (0.0%)	1 (1.0%)	12 (12.4%)	81 (83.5%)
Understanding my patient's body language can help me understand if they trust me. (n=96)	2 (2.1%)	0 (0.0%)	2 (2.1%)	27 (28.1%)	66 (68.8%)
I believe that clear communication is a way to build trust with patients. (n=97)	2 (2.1%)	0 (0.0%)	1 (1.0%)	12 (12.4%)	82 (84.5%)
Patients are more likely to form a trusting relationship when they are referred to their chiropractor. (n=97)	3 (3.1%)	2 (2.1%)	24 (24.7%)	41 (42.2%)	27 (27.8%)
My patients need to see a clinical improvement in the first three visits, otherwise they won't trust me. (n=97)	12 (12.4%)	21 (21.6%)	26 (26.8%)	27 (27.8%)	11 (11.3%)
Interprofessional communication builds trust with my patients. (n=97)	1 (1.0%)	1 (1.0%)	13 (13.4%)	58 (59.8%)	24 (24.7%)
Selling products (i.e. orthotics, pillows, braces etc.) negatively influences trust between patients and their chiropractor. (n=97)	7 (7.2%)	46 (47.4%)	35 (36.0%)	6 (6.2%)	3 (3.1%)
Respecting patient privacy and confidentiality is important to developing trust. (n=97)	2 (2.1%)	0 (0.0%)	1 (1.0%)	13 (13.4%)	81 (83.5%)
It's more difficult to form trusting relationships when appointments are booked by someone other than the patient (i.e. spouse or parent). (n=96)	2 (2.1%)	30 (31.2%)	37 (38.5%)	20 (20.8%)	7 (7.3%)

(Table 2). Table 3 demonstrates findings from Likert scale questions regarding themes and key concepts derived from interviews. Table 3 demonstrates the general acceptance of honesty, authenticity, patient communication, interprofessional communication, and patient privacy as factors that influence the formation of trust between chiropractors and patients. Less agreement was found regarding whether patients were more likely to form trust with their chiropractor if they were referred, if they noted a clinical improvement within the first three visits, or if their appointment was booked by someone else. In contrast to interview findings, the majority of respondents stated that selling products did not negatively influence trust between patients and their chiropractor.

Discussion

The objective of this study was to explore how chiropractors understand the process of building trust with patients. There are very few studies evaluating how healthcare pro-

viders can build trust with patients. Specifically, there are no studies to our knowledge that investigate how chiropractors form trust with their patients; particularly in the context of Canadian chiropractors. During this study, we discovered that chiropractors viewed interpersonal skills as an important driver of trust. Patient trust in their healthcare provider has been shown to stem from knowledge sharing, professional and emotional connection, partnership, respect, and honesty.⁸

Four concepts of honesty, competence, fidelity, and confidentiality were discussed during the interviews; however, some of these concepts were interpreted differently by participants. For example, competence was defined by Hall *et al.*⁵ by admitting to a lack of knowledge or experience, yet participants interpreted the concept as how patients perceive practitioner competence. This emerged as an important theme throughout the interviews. Similarly, fidelity was described to participants as disclosing conflicts of interest but was interpreted as selflessness

and benevolence. Furthermore, participants specifically discussed the importance of caring for patients, rather than using the term fidelity. Confidentiality was not seen as important for building trust throughout the interviews.

The sequential exploratory mixed-method design was implemented in order to use survey results to either support or refute interview findings. A recently published Canadian chiropractic survey recorded a response rate of 8%.¹⁹ As we surveyed a similar population, it was expected that we would achieve a similar response rate. We aimed to ensure similarities between the interviewees and survey participants, yet also represent the diverse viewpoints within the profession. The mean chiropractic college graduation dates between interview and survey participants were similar; 2000 and 1997, respectively. The majority of interview participants practice in an urban setting, similar to most survey respondents. Despite the majority of survey respondents practicing general musculoskeletal care and spending five to 20 minutes with patients, there was still diversity in practice style (e.g. general musculoskeletal, wellness, family care etc...) and length of patient interactions (<5 minutes to 30 minutes).

Despite the variability in practice style and length of patient interactions, there was still considerable agreement among several components of trust. Interview and survey findings confirmed the importance of honesty, communication (verbal and non-verbal), perceived competence, and authenticity. Caring was a theme that was supported by our interviews but was unintentionally omitted in the survey. Privacy and confidentiality were important to survey respondents but not interview participants. Interview participants often felt that privacy and confidentiality weren't as important to the formation of trust as other healthcare professionals. Aggressively marketing products to patients was perceived as a negative influencer of trust by interviewees, whereas survey respondents did not find a negative association with development of trust and selling products to patients. Interview participants may have associated selling products with coercive marketing tactics whereas survey respondents may have associated selling products with conveniently providing necessary products for patients.²⁰ Also, survey respondents did not believe that it was more difficult to form trust with patients when appointments were booked by someone other than the patient.

Overall, the findings in our study demonstrate that

there are several similarities between nurse-patient trust and physician-patient trust. Bell and Duffy⁴, conducted a study with nurses emphasizing the expectation of competence and benevolence as antecedents of trust, which emerged as themes in during our interviews. However, they also emphasized antecedents of trust that did not emerge as main themes during our study; for example: goodwill, fragility/vulnerability, and an element of risk.⁴ Hall *et al.*⁵ reported components of physician-patient trust that were similar to chiropractor-patient trust, such as competence and honesty. Despite the reported importance of confidentiality and fidelity in physician-patient trust by Hall *et al.*⁵, our participants did not perceive these to be important antecedents of trust amongst chiropractors. Given the overwhelming proportion of chiropractors practicing in community-based clinics, it is reasonable that these differences in chiropractor-patient trust were observed in comparison to nurses and physicians.

Limitations

This study has several limitations which may impact the validity and reliability of our findings. One limitation is that chiropractors recruited for the interviews come from a PBRN, a somewhat homogeneous group. All interviewees were recruited from a local PBRN and it might be reasonable to expect that PBRN members who demonstrate a commitment to research may express views that are different than the general population of chiropractors in BC. This general homogeneity may explain why we achieved saturation after just five interviews. It may also limit the generalizability of the results of the interview process outcomes, from which the survey was constructed, to those of the general chiropractic population, to which it was administered. It is possible that recruitment of participants outside of the PBRN could have led to a greater diversity of responses which may have influenced our findings. A survey response rate of 8.4% was low and may limit the generalizability of our findings. Ascertaining the interviewees' practice style and time spent with patients would have helped us understand whether the survey sample characteristics were similar to the interview sample. Another limitation of our study is that data saturation may not have been reached after six interviews. Conducting additional interviews would have improved confidence that saturation had been achieved.

The coding and analysis process were performed by

one investigator which could have introduced bias. The investigator kept a reflexivity journal in an effort to identify biases throughout the interview process. Member checking also occurred after interview transcription to ensure accuracy. Data analysis in pairs would have improved the trustworthiness of our findings; however, these tasks were only performed by one investigator.

The purpose of evaluating chiropractors' perception of patient trust is important initial research. This study does not include the viewpoint of patients and findings from this study should be used to inform future patient-oriented research on trust with healthcare providers.

Conclusion

The findings in this study provide an opportunity for chiropractors to reflect on their clinical encounters and assess whether there are opportunities to improve therapeutic alliances by implementing strategies to build trust. Chiropractors can employ a variety of interpersonal strategies to foster trust with patients. Interview participants appeared to place value on humanistic values when interacting with patients. Chiropractors perceive that trust can be fostered with patients by demonstrating characteristics of competence, honesty, caring, and communication. The purpose of this study was to explore how chiropractors build trust with patients; however, future studies should explore patient perspectives of trust. Findings from this study may influence future patient-oriented research which may further explore patient perspectives.

References

1. Pinto RZ, Ferreira ML, Oliveira VC, Franco MR, Adams R, Maher CG, et al. Patient-centred communication is associated with positive therapeutic alliance: a systematic review. *J Physiother*. 2012; 58(2): 77-87.
2. Stilwell P, Harman K. Contemporary biopsychosocial exercise prescription for chronic low back pain: Questioning core stability programs and considering context. *J Can Chiropr Assoc*. 2017; 61(1): 6-17.
3. McCabe TJ, Sambrook S. The antecedents, attributes and consequences of trust among nurses and nurse managers: a concept analysis. *Int J Nurs Stud*. 2014; 51(5): 815-827.
4. Bell L, Duffy A. A concept analysis of nurse-patient trust. *Br J Nurs*. 2009; 18(1): 46-51.
5. Hall MA, Dugan E, Zheng B, Mishra AK. Trust in physicians and medical institutions: What is it, can it be measured, and does it matter? *Milbank Q*. 2001; 79(4): 613-639.
6. Plomp HN, Ballast N. Trust and vulnerability in doctor-patient relations in occupational health. *Occup Med*. 2010; 60(4): 261-269.
7. Birkhauer J, Gaab J, Kossowsky J, Hasler S, Krummenacher P, Werner C, et al. Trust in the health care professional and health outcome: A meta-analysis. *PLoS ONE*. 2017; 12(2): 1-13.
8. AlRuthia Y, Almalag H, Sales I, Albassam AA, Alharbi FA, Almutairi AM., et al. The relationship between trust in primary care physicians and medication knowledge among diabetic patients. *Res Social Adm Pharm*. 2018; 15(6): 656-661.
9. Crom A, Paap D, Wijma A, Dijkstra PU, Pool G. Between the lines: A qualitative phenomenological analysis of the therapeutic alliance in pediatric physical therapy. *Phys Occup Ther Pediatr*. 2019; 40(1): 1-14.
10. Hanson WE, Creswell JW, Plano Clark VL, Petska KS, Creswell JD. Mixed methods research designs in counseling psychology. *J Couns Psychol*. 2005; 52(2): 224-235.
11. Creswell JW. Research design: Qualitative, quantitative, and mixed methods approaches. 3rd ed. SAGE publication, 2009: 3-21.
12. Etikan I. Comparison of convenience sampling and purposive sampling. *Am J Theoret Appl Stat*. 2016; 5(1): 105-111.
13. Englander M. The interview: Data collection in descriptive phenomenological human scientific research. *J Phenomenol Psychol*. 2012; 43(1): 13-35.
14. Bova C, Route PS, Fennie K, Ettinger W, Manchester GW, Weinstein B. Measuring patient-provider trust in a primary care population: Refinement of the health care relationship trust scale. *Res Nurs Health*. 2012; 35(4): 397-408.
15. Kidd K, Dugan E, Hall M, Zheng B, Levine D. Development of the wake forest university patient trust scale. *Gerontologist*. 1999; 39: 517.
16. McNair R, Taft A, Hegarty K. Using reflexivity to enhance in-depth interviewing skills for the clinician researcher. *BMC Med Res Methodol*. 2008; 8(1): 73.
17. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006; 3(2): 77-101.
18. Castleberry A, Nolen A. Thematic analysis of qualitative research data: Is it as easy as it sounds? *Curr Pharm Teach Learn*. 2018; 10(6): 807-815.
19. Bussieres AE, Evans R, Leach M, Schneider MJ, Stuber K, Terhorst L. Self-reported attitudes, skills and use of evidence-based practice among Canadian doctors of chiropractic: a national survey. *J Can Chiropr Assoc*. 2015; 59(4): 332-348.
20. Page SA, Grod JP, McMorland DG. A descriptive study of chiropractors' opinions and practices regarding office-based health product sales. *Chiropr Man Therap*. 2012; 20(10).

Appendix 1.

Chiropractor Interview Guide

Welcome

Introductions and project overview

Before we begin, I would like to review a few items from our consent form:

- Your participation in this project is voluntary and you are free to leave the discussion at any time.
- Our discussion will not last more than one hour.
- You can choose not to answer any question.
- All of your answers are private and anonymous.
- I will be recording our discussion so that all of your ideas are captured.

Introduction

Trust is a complex concept but can be a valuable component of building a therapeutic relationship with patients. Trust between patients and physicians has been shown to improve satisfaction with care and health outcomes. I'd like to understand how you form trusting relationships with your patients.

Let's get started:

1. What is your practice location (Urban, Suburban, or Rural)?
2. What year did you graduate from chiropractic college?
3. Which patient characteristics do you believe contribute to a trusting therapeutic relationship?
4. Conversely, which chiropractor characteristics contribute to a trusting therapeutic relationship?
5. How do you, specifically, build trust with your patients?
6. How quickly do you feel patients form impressions of their chiropractors?
7. How do you know when a trusting bond has been formed with a patient?
Probe: Can you think of a time when a patient trusted you? How did you know that they trusted you?
8. In your opinion, how do the total number of visits or length of therapeutic relationship affect trust?
9. To what extent do you believe patients are more or less likely to trust their chiropractor if they've seen other practitioners for the same condition?
10. To what extent do you believe patients are more likely to trust their chiropractor if they've been referred from another health care provider or chiropractor?

Dimensions of the Wake Forest Scales Measuring Trust

Ask participants if/how they incorporate fidelity, competence, honesty, or confidentiality into their interactions with patients.

Fidelity is defined as pursuing a patient's best interests and not taking advantage of their vulnerability. This often consists of caring, respect, advocacy, and avoiding conflicts of interest.

11. How do you incorporate fidelity into your patient interactions?

Competence is defined as avoiding mistakes and producing the best achievable results. Mistakes can be cognitive (errors in judgement) or technical (errors in execution).

12. How do you incorporate competence into your patient interactions?

Honesty is defined as telling the truth and avoiding intentional falsehoods. Providing false hopes or failing to admit mistakes.

13. How do you incorporate honesty into your patient interactions?

Confidentiality is defined as protection of private and sensitive information

14. How do you incorporate confidentiality into your patient interactions?

Appendix 2. Survey

Study Title: Understanding How Chiropractors Build Trust with Patients

Your support in completing this questionnaire is greatly appreciated. **If the questionnaire is completed and submitted, it will be assumed that consent has been given.**

The following questionnaire aims to identify components of the chiropractor-patient relationship associated with trust. This questionnaire should take approximately 10 minutes to complete. Please use the drop-down menu or click the circle next to your best selection.

What is your year of birth?

What is your year of graduation from chiropractic college?

In which geographic setting is your main practice?

What is the average length of your patient interactions?

What is the main focus of your chiropractic care?

To what extent do you agree with the following statements?

- Chiropractors who are honest are more likely to form trust with their patients.
 - My patients are more likely to trust me if I'm authentic.
 - Understanding my patient's body language can help me understand if they trust me.
 - I believe that clear communication is a way to build trust with patients.
 - Patients are more likely to form a trusting relationship when they are referred to their chiropractor.
 - My patients need to see a clinical improvement in the first three visits, otherwise they won't trust me.
 - Interprofessional communication builds trust with my patients.
 - Selling products (i.e. orthotics, pillows, braces etc.) negatively influences trust between patients and their chiropractor.
 - Respecting patient privacy and confidentiality is important to developing trust.
 - It's more difficult to form trusting relationships when appointments are booked by someone other than the patient (i.e. spouse or parent).
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